HASSELBLAD

Hasselblad H3DII

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The Evolution of the H3DII

At Hasselblad we have always taken pride in finding new ways to use existing technology to push the photographic envelope, or – when that doesn't work – creating technology that will. And as photographic technology advances we work hard to do what we are best at – leading technological developments, not following them.

Achieving superior image quality with modern digital photography means finding a way to get the most from camera hardware, advanced optics, massive sensors, processing software, and the computing power of today's computers. With the launch of the H3D, Hasselblad brought all the advantages of a truly integrated DSLR to the large sensor format, enabling all photographic parameters to be optimized and resulting in an unsurpassed level of image quality. Now, with the launch of the Hasselblad H3DII, the world's best DSLR camera has gotten even better. The H3DII is the 4th generation of the Hasselblad H system, and provides improved controls and functionality, better sensor cooling, a new and more intuitive user interface, and a bright, 3" display. And when combined with the new Hasselblad's image processing software, the H3DII will set a new standard for digital photographic quality.

The H3DII combines the advanced digital communication and optimization of the best DSLRs with the quality and versatility of the Hasselblad system. The H3DII represents the combination of decades of photographic expertise, a keen understanding of digital photography, and the experience we gained from developing he world's most advanced camera system. The H3D was not just another step in the evolution of a camera system, it was an evolutionary leap. The H3DII represents the continuing evolution of the world's most advanced DSLR camera system.

Hasselblad has always been motivated by a true passion for photography. Our tradition has always been one of innovation, advance, and unflagging dedication to quality. At Hasselblad, we will never settle for "good enough". So photographers won't have to do so either.

That's why we made the H3DII.

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In a League of Its Own: The Hasselblad H3DII

The H3DII is the ultimate high-end DSLR camera system. Taking the advances of the H3D even further, the H3DII takes photographic flexibility and image quality to entirely new levels. The unprecedented interaction between the various system components combine with increased lens performance and an unprecedented level of image sharpness to outperform any professional digital camera system on the market today, delivering outstanding pixel resolution, better colors, and improved detail rendering.
The large format light channel provided by the H3DII and the H System lenses enables the use of the largest image sensors currently available – 48x36mm – more than twice the size of even the largest 35mm camera sensors.

These sensors hold more and larger pixels, ensuring ultra sharp images without gradation break-ups in even the finest lit surfaces.

The more things change, the more they stay the same

The difference between medium format photography and 35mm photography was obvious. The size and quality of both the equipment and the images they produced were plain to see. There are some manufacturers today who would have you believe that smaller, lower quality cameras, lenses, and sensors can somehow match the quality of the largest format sensors and highest quality lenses. Think again. Because the simple truth is that – even in digital photography – size still matters. And in a competitive market, making your images stand out is not a luxury, it's a requirement.

The H3DII is truly in a league of its own. And the images you create with it will be too.

New photographer-friendly features

The H3DII is packed with new features designed to help you get the most from your photography, such as an integrated cooling sink that uses the entire camera body's lower surface to dissipate CCD heat. This results in dramatically reduced image noise due to heat.

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A new breed of DSLR – The H3DII Advantage:

- Unmatched combination of quality and flexibility
- Ultra-Focus: integral optimization of digital lens performance
- Hasselblad Natural Color Solution
- Choice of eye-level or waist-level viewfinders
- Integrated 22, 31 and 39 Mpix capture units with 3” display
- Integrated CCD cooling sink for lower noise

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Shot by David Trood/Getty Images

Another interesting feature is Hasselblad's Global Image Locator (GIL) a unique GPS navigation system that automatically records your camera's exact geographic coordinates at the precise moment of image capture. This data can then be integrated in the metadata of a specific image file and used together with the Hasselblad's new imaging software Phocus to allow images to be located on a map or found in a computer file system using the GPS coordinates as a search term. All the image files shot or stored in a specific location can be easily identified and found. If geographical data is not available, the user can search the location via the internet with Google Earth and will automatically be guided to the files produced on that location.

The H System also features an interchangeable, waist-level viewfinder for all H system cameras. The large, bright viewfinder image is ideal for creative composing, and shooting from a lower than eye-level position opens creative possibilities. This viewfinder enables photographers to maintain eye contact with the model, a key advantage in portrait photography. With the H3DII you can choose your way of seeing the world – eye- or waist-level – an important flexibility for the professional photographer.

Instant Approval Architecture – Knowing What You've Got

The H3DII also features Hasselblad's Instant Approval Architecture (IAA), an enhanced set of feedback tools designed to drastically simplify the image selection process so you can concentrate on your shoot. Audible and visible signals and recorded information in the file and the file name make classification and sorting quick and easy, whether in the field or in the studio. The Hasselblad H3DII is fully integrated with the Hasselblad IAA, bringing automated image classification into your digital workflow from the split second of capture.

The advanced communication between the lenses and capture unit in the H3DII also lays the ground for Hasselblad's Digital APO Correction (DAC) and the new Ultra-Focus functionality, setting new standards for professional image quality and providing a higher level of detail and sharpness.

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A new breed of DSLR – The H3DII Advantage:

- Thumbwheel control of digital menus
- Direct ISO/WB control
- Field FW upgrade of H3D camera
- Market's most versatile lens program
- Choice of media: CF card - Image Bank II
- Easy sensor cleaning

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Now it's in your hands.

Over fifty years ago, Victor Hasselblad designed the best camera system in the world. And in the ensuing decades, photographers used that system to create some of the finest photographic images man has ever produced. Images that encapsulated – and changed – the way we see the world around us.

Now, over half a century later, we've created an even better camera system. We can't wait to see what you do with it.

Better Color, Better Workflow, Better Business

The H3DII utilizes Hasselblad's powerful Natural Color Solution (HNCS). HNCS works invisibly in the background in conjunction with Hasselblad's image processing software to produce outstanding and reliable out-of-the-box results, whatever the challenge, with skin tones, special product gradations, and other difficult colors reproduced easily and effectively.

In addition, the H3DII uses Hasselblad's custom raw file format, 3F RAW (3FR), to ensure that images captured on Hasselblad digital products are quickly and safely stored, including the special color information necessary for the HNCS. 3FR files are stored using lossless image compression, reducing required storage space by 33%.
The 3FR files can be converted into Adobe's raw image format DNG via Hasselblad's imaging software. Only when using the Hasselblad 3FR files, however, can you utilize Digital APO Correction and fully optimize the colors available within the DNG file format.
All H3DII image files carry a full set of metadata, including capture conditions, keywords and copyright.

Workflow for the professional photographer

Hasselblad's image processing software enables an image processing workflow that gives the highest degree of control for your studio photography. The latest version of Hasselblad's image processing software enables you to manipulate color temperature and compare image details across multiple images for precise image selection. This software uses the 3FR files and runs on both Macintosh and Windows computers and allows you to provide free copies to all your co-workers and production partners.

The 28mm HCD

The groundbreaking technology of the H3DII has made possible a specially designed 28mm lens, expressly developed for this camera. The design has been optimized for the 36x48mm sensor area of the H3DII, resulting in an extremely compact lens that can fully utilize the Digital APO Correction function and further increase the resolution of the image.

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Shot by Stuart Weston
Hair by Efi Davies, Tony & Guy academy

A new breed of DSLR – The H3DII Advantage:

- View camera option
- Un-tethered and tethered operation
- GPS accessory option
- Hasselblad 3FR raw - or DNG export
- Full Digital APO Correction for improved image sharpness and detail

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Bigger is still better.

The first step to perfect images

Images don't start out as ones and zeros. They have to get there. And no matter how fantastic your digital system is, it can only capture the image your lens delivers. If your lenses are only adequate, or if they are too small to deliver the full spectrum of the image before you, then no amount of pixels or software tricks will ever be able to raise your images past what they are – just "good enough".

Professional Quality from Start to Finish

The unsurpassed range of HC/HCD lenses feature extremely accurate and reliable central lens shutter designs, which expose the entire film area simultaneously, not scanning across the frame as focal plane shutters do, and allow flash sync at all shutter speeds, up to an astonishing speed of 1/800 sec. Focal plane shutters, on the other hand, can only use flash sync at shutter speeds less than 1/125 sec. HC lenses, give great flexibility in professional fill-in flash applications, helps solve troublesome lighting conditions, and open up a world of new creative opportunities.

Despite their durable design, Hasselblad lenses also have around twenty times less mass than focal plane shutters for the same frame size, which means that the shutter can react almost instantaneously when the release button is pressed. Hasselblad lenses are also extremely quiet in operation and generate far less vibrations than focal plane shutters do, especially important for digital photography, producing sharper results and allowing you to shoot hand-held even at slower shutter speeds without sacrificing quality.

And in a world where every image (and every pixel of every image) counts, we're sure that the results you achieve with our digital APO correction will make you – and your customers – glad you chose a Hasselblad system.

Ultra-Focus and digital APO Correction

In the H3D, information about lens and exact capture conditions are fed to the digital camera engine, enabling precise-fine-tuning of the auto-focus mechanism, taking into account the design of the lens and the optical specification of the sensor. This new feature brings a new level of sharpness and resolution to the entire HC lens program. In addition, Hasselblad's x1digital APO chromatic correction feature enables you to get even more out of every lens. When using a complete Hasselblad system,

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Shot by Peter Mathis
Skier: Kaj Zackrisson, Sweden

this feature allows the mapping of each Hasselblad lens and the capture of advanced data, which are then used to perform an automated correction for color aberration and distortion on every shot, ensuring that every digital capture is automatically optimized to provide the finest detail that a given lens can produce.

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The H3DII Camera System.

Just the whole is more than the sum of its parts, buying a camera is not the same as buying into a camera system. When you buy a Hasselblad system you are buying into a total photographic approach. We are constantly developing new technology and new ways to enable improved communication between system components. When combining Hasselblad lenses, viewfinders, capture units, and software with a digital Hasselblad camera, you are guaranteed a level of quality, functionality, customization, and flexibility unmatched by any other system in the world. And more importantly you are guaranteed that the quality of the images that come out of your camera will not betray the vision that went into it.

1. Viewfinders
Hasselblad viewfinders ensure that what you see is what you get. And when used together with our extremely bright focusing screens, they make precise focusing, depth-of-field accuracy, and composition easier than ever before. The Hasselblad system includes a comprehensive range of viewfinders that match almost any condition or application and allow you to choose your composition format at will.

2. Lenses
The lens is the first – and perhaps most important – step in the technical side of the photographic process. The amount of light one can capture and how one captures it determines a great deal of the rest of the process. Hasselblad lenses are specially equipped to transmit complex image data throughout the system, enabling a wide range of advanced functions, such as Digital APO Correction, Instant Approval Architecture, and more.

3. Camera Housing
Hasselblad cameras are renowned for their ruggedness and durability and their highly efficient internal stray-light protection. Built around high-strength aluminum cores and solid, stainless steel housing they ensure reliable and durable performance under even the toughest of conditions and for many years to come.

4. Capture and Control Unit
The Hasselblad capture and control units are designed to achieve stunning image quality and optimize workflow. Hasselblad provides three modes of storage, CF card, portable Image Bank, or straight to computer shooting.

5. Software
The software included with Hasselblad camera systems doesn't just provide a powerful post production toolkit, it provides remote hardware control, better workflow solutions, and the most accurate color reproduction in the world today. All software is designed to produce professional-level results on both Mac OS and Windows platforms.

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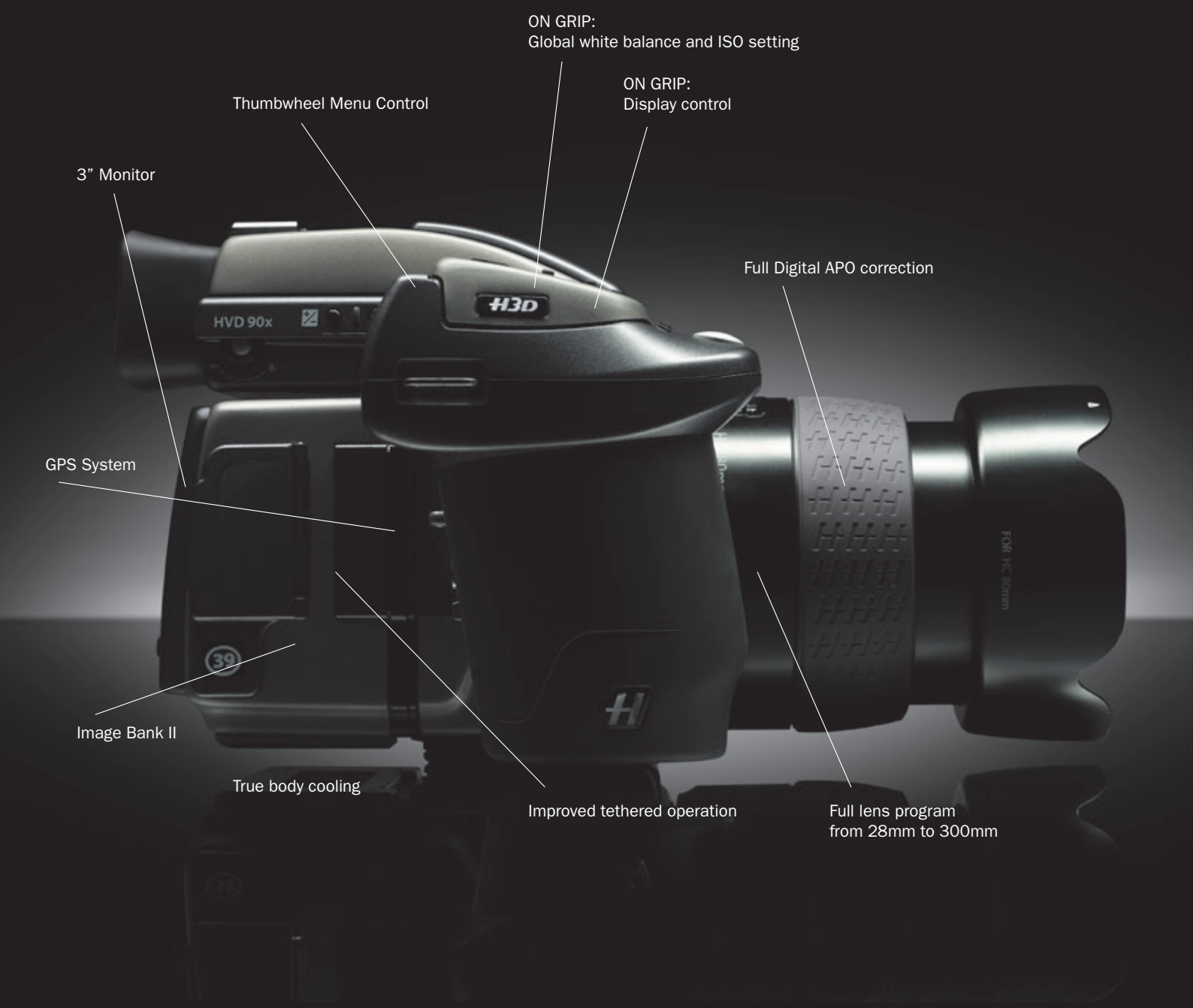

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Photographic Flexibility.

With the Hasselblad H3DII you can customize your style of shooting to suit your own specific form of photography – and then to change it the next day or the next minute as your needs change. Because we think a camera should be as versatile as the people who use it.

Exposure Flexibility

The central lens shutter featured in all lenses enables you to use flash at high shutter speeds without shadowing effects. The ability to use flash sync at all shutter speeds provides both creative and practical flexibility.

Composition Flexibility

The H3DII comes with a new HVD 90x viewfinder designed for full performance over the large 36x48mm sensor. With the H3DII system, however, you have the choice of three different viewfinders – the analogue viewfinder, the digital viewfinder, and the classic waist level viewfinder – so can choose how you want to compose your shots.

Sensor Flexibility

The H3DII is available in three versions, a 22 megapixel sensor, a 31 megapixel sensor, or a staggering 39 megapixels, enabling you to choose an H3DII to suit your specific resolution needs

Workflow Flexibility

When importing images from your CF card or Image Bank you can choose the 3FR or a DNG workflow. With the 3FR you get all the expert tools provided by Hasselblad with the DNG you get a good mainstream solution.

Lens Flexibility

The outstanding range of Hasselblad HC lenses is suitable for both analogue and digital work. Hasselblad has also begun to provide HCD lenses, opening new creative opportunities, the first being the 28mm wide angle lens.

Camera Flexibility

The digital part of the H3DII camera can be detached and mounted on a view camera, such as a Linhof or Sinar, giving you opportunities that are unrivalled by other camera manufacturers.

Capture Flexibility

The digital capture unit of the H3DII can be detached and used on a view camera controlled by the flash sync signal from the view camera shutter. A clean and dust-free sensor is essential and the modular design of the camera allows for easy access to and cleaning of the sensor, saving you hours of retouching work later.

Storage Flexibility

The H3DII operates with one of three media types; the CF card for maximum mobility, the Image Bank, for shooting many images quickly, and the tethered solution for studio operation. With these three operating and storage options, you can select a mode to suit your particular style of working.

GPS Recording Flexibility

Hasselblad's Global Image Locator (GIL) is an accessory for any Hasselblad H system digital capture product. The GIL device tags all non-indoor images with GPS coordinates, local time, and altitude. This data enables a number of future applications that refine image archiving and retrieval, such as the ability with the upcoming Phocus software to directly map images to Google Earth.

Ultra fast storage with 100 GB Image Bank.

Viewing flexibility with new waist level viewfinder

H3DII back used on a view camera.

Record exact location at the moment of image capture with Hasselblad's Global Image Locator (GIL)

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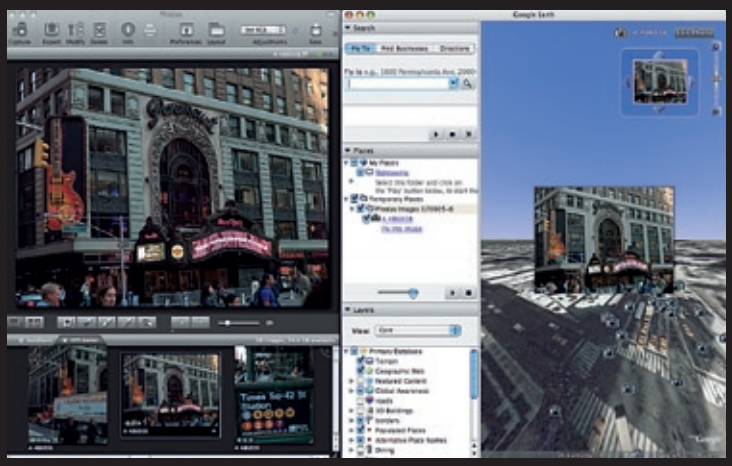
Hasselblad RAW Conversion.



Impressive new features:

Moiré removal

Even very high resolution images can exhibit moiré under certain circumstances. With the new Phocus, moiré is effectively removed without the need to make special mask selections or other manual procedures. Moiré removal is performed directly on the raw data.

New metadata (GPS, etc)

The metadata included in Phocus images follows the IPTC Core standard with XMP. We have also added GPS data functions in order to allow a number of new functions. Phocus links GPS data directly to Google Earth, making geographic reference a snap and image storage and retrieval much easier.

Hasselblad DSLR camera preparation

Any photographer knows that the more prepared you are for a shoot, the more likely things are to go according to plan once in the field or on the shoot. Phocus is designed to make pre-planning easier than ever before, allowing you to pre-set camera parameters and folders and the like.

New tethered operation control

Phocus also provides extended control of your Hasselblad camera, including control of the lens drive for focusing when the camera is in a remote position or the digital capture unit is mounted on a view camera.

Improved GUI

The GUI includes straightforward options for customizing your set-up to suit a number of different workflow situations, such as choice of import source, browsing/comparing functions, file management, image export in a range of file formats, pre-set of options for coming shoots, and much more.

Improved Views

In addition, the Phocus view section allows layout and composition to be tailored to suit the current workflow, providing a wide range of options including full view, compare, browse, horizontal or vertical view, and so on. Multiple folders can be open at the same time for simultaneous viewing, comparison and selection.

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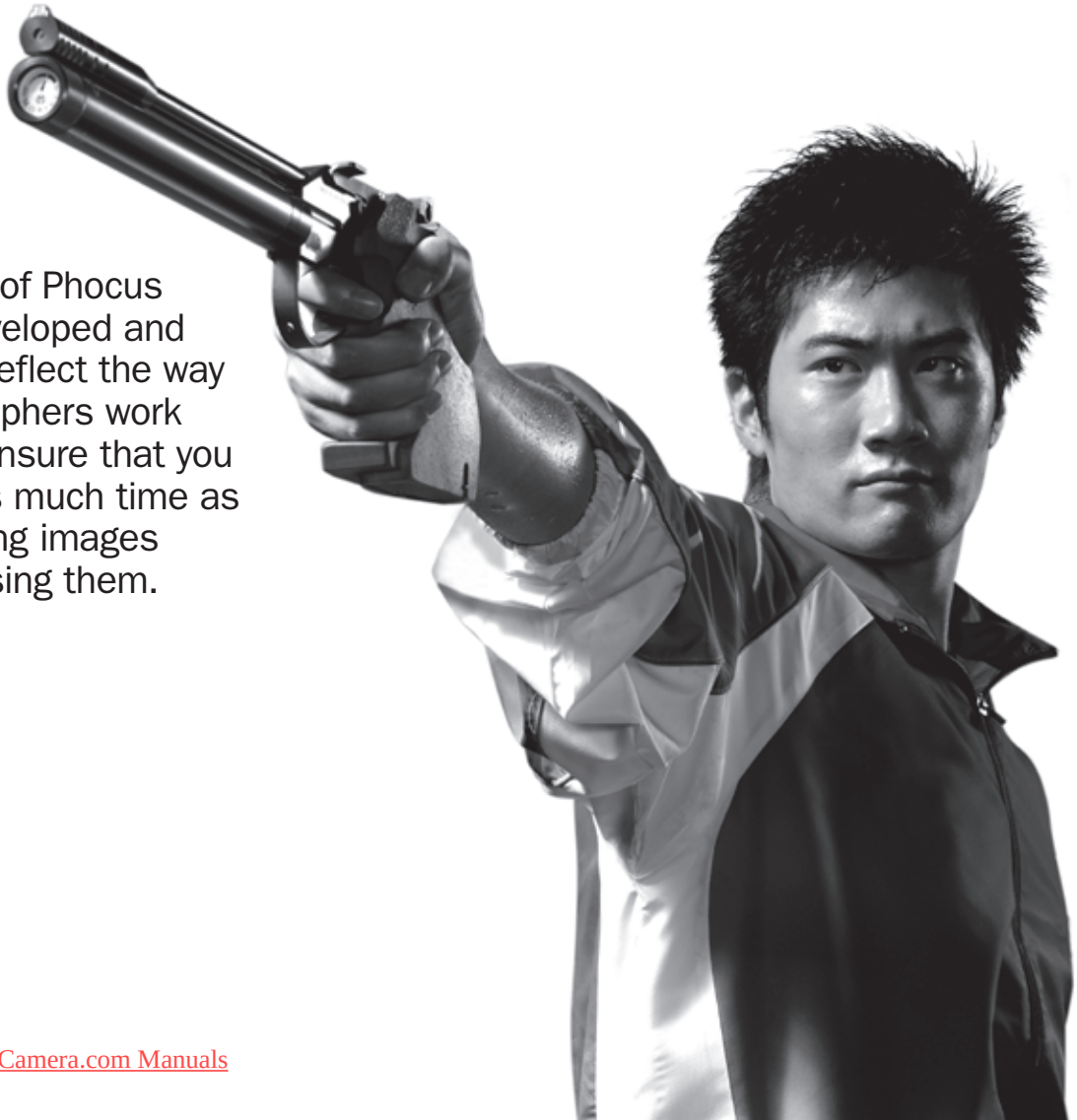
Shot by Tang Hui

The world's finest cameras, the market's largest sensors, the world's finest lenses, and now the world's most advanced image processing software.

Over the years, the image processing engine in Hasselblad's FlexColor software has evolved into a powerful raw converter. Now, with the release of Phocus, Hasselblad has added an entirely new processing engine - featuring a range of new techniques and features. Phocus provides the power and finesse needed to serve and support the latest Hasselblad camera developments and to enable groundbreaking new levels of image quality. And all in a modern and easy-to-use environment.

Every aspect of Phocus has been developed and designed to reflect the way that photographers work and to help ensure that you can spend as much time as possible taking images – not processing them.



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Hasselblad Star Quality.

Resolution, Natural Color, Optical Purity, Clarity, and Detail are all key components in defining superior image quality. Each parameter, alone – or a pair, or three – can improve image quality but to achieve ultimate image quality, photographers need a system that excels in all five of these areas. A clear understanding of these quality parameters helps photographers understand what high end digital photography is and what it isn't.

At Hasselblad we focus on constantly improving our performance in these areas – striving for perfection and never accepting "good enough" – in order to continuously "raise the bar" of image quality.

Consider Hasselblad Star Quality our promise to you - and your promise to your customer. Consider it three simple words that explains over 50 years if imaging expertise. Three major components are required to produce this level of quality:

- **Optical system:**
  The Hasselblad HC/HCD large format digital lenses serve as the perfect complement to even 39Mpix sensors, the largest in the world
- **Camera integration:**
  Hasselblad's high level of camera integration guarantees optimum physical, electrical and digital operation, squeezing maximum performance and image quality from the lenses, viewfinder, and digital capture unit.
- **High-end raw converter:**
  The Hasselblad Raw Converter (HRC) working with our 3FR raw file.

Resolution

Why is "Bigger" still "Better"? Simply put, the larger and more optically perfect your lenses are, combined with the large physical size and pixel-count of your digital sensor the higher your image quality can be taken. The high definition image of the world on your sensor and on your focusing screen is simply un-matched, including more detail, lower risk of moiré and other artefacts, and more accurate colors. Hasselblad's HC/HCD lenses and 39 megapixel sensors are more than twice the physical size of today's largest 35mm sensors, producing the largest digital files currently available for professional photography. You may never need each and every pixel. But when you do need them, you're awfully glad they're there. Simply put, the higher your resolution, the more creative you can be with your images.

Natural Color

In the past, color management solutions have imposed limitations on professional digital photographers, forcing them to choose a specific color profile to suit each specific job and thereby sacrificing some colors to get others right. This is an unacceptable solution, in our opinion. The Hasselblad Natural Color Solution accurately reproduces the full visible color spectrum – be it skin tones, special product colors, or difficult gradations – easily and effectively, every time and with the use of a single color profile. Our complete knowledge of the filter and sensor characteristics of each individual camera have made this possible. Simple, correct, and indispensable.

Optical Purity

Digital Auto Correction (DAC) is Hasselblad's unique way of digitally

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Shot by Anders Espersen

correcting for the optical phenomena that create minor optical errors, which are always present in photographic lenses. Whether it is distortion, chromatic aberration or vignetting, DAC automatically corrects for these errors without struggling with sliders, numbers etc by using detailed lens information that resides inside the RAW 3FR file generated by the new generation of Hasselblad cameras. These advanced corrections are based on accurate digital lens mapping and the high production repeatability for the HC/HCD lenses.

Clarity

Finding optimal noise reduction techniques is a tricky science. Finding the proper balance between preservation of detail and clarity and the removal of unwanted static or “noise” from an image requires an understanding of both technology and of photography. The high quality of Hasselblad’s optical components and the advanced noise reduction techniques (digital and mechanical) are not just the rival of any other system, they achieve an optimum balance between desired richness of detail and noise-free imaging.

Detail

It is in the detail that you discover what your optics and digital sensor can really capture. The combination of large sensor and outstanding optics makes detail stand out. Compare images shot at full aperture with Hasselblad to a 35mm at full aperture and see the difference. Once the detail is captured, the Hasselblad Raw Converter can be let loose – since the art of balance is never more evident than when it comes to image processing. Determining how to make jagged pixel lines smooth while maintaining color, clarity and sharpness demands the most advanced calculations and enough knowledge of photography to know which compromises are beneficial – and which are not. The Hasselblad raw processor working on the 3FR raw image format is the best available and it allows you to accurately reproduce details that have proved difficult for any digital system. Details such as single hair strands, small colored patterns, fine text, and so on. With the H3D, you can rest assured that every detail is preserved – and nothing is sacrificed.

The only way to truly understand these qualities, however, is to see for yourself. Check out the Hasselblad Star Quality difference at:

www.hasselblad.com/products/hasselblad-star-quality

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Hasselblad H3D-System

Delivering the superior craftsmanship and quality that produces the world's highest quality images has made Hasselblad cameras famous for over half a century. The Hasselblad H3D System and HC/HCD System lenses continue this tradition. The H3DII family comes in three resolutions (22, 31 and 39 Megapixels), each providing a range of advanced features, including the freedom to choose between eye-level and waist-level viewfinders, digitally APO corrected lenses, on-the-fly classification of images, and unparalleled integration between lens, body, software, and capture device.

Model comparison

	Pixels	Sensor format	ISO range	Capture speed	HC lens factor	HCD28
H3DII-31	31 million	33.1x44.2mm	ISO 100-800	1.2 sec/capture	1.3	31mm
H3DII-22	22 million	36.7x49.0mm	ISO 50-400	1.4 sec/capture	1.1	28mm (full-frame)
H3DII-39	39 million	36.7x49.0mm	ISO 50-400	1.4 sec/capture	1.1	28mm (full-frame)

Technical specifications

File format: Lossless compressed Hasselblad RAW 3FR

Shooting mode: Single shot

Color management: 16 bit

Image storage: CF card type U-DMA, ImageBank-II or tethered to Mac or PC

Color management:
Hasselblad Natural Color Solution

Capture rate: 1.2/1.4 seconds per capture
40 images per minute

Color display: 3" TFT color

Histogram feedback: Yes

IR Filter: Anti-reflex coated, mounted on CCD Sensor

Acoustic feedback: Yes

Software: FlexColor (included; for Mac and PC)

Platform support: Mac OSX, NT, 2000, XP

Host connection type: FireWire 800 (IEEE1394b)

View Camera compatibility: Yes

Operating temperature: 0-45˚C/32-113˚F

Dimensions with 2,8/80mm lens:
153x131x213mm (WxHxD)

Weight: 2175 g (with Li-Ion battery and CF card)

Camera type: Large sensor full format DSLR

Lenses: Hasselblad HC lens line and HCD 28 with integral lens shutter

Shutter speed range: 1/800s to 32 seconds

Flash sync speed: Flash can be used at all shutter speeds

Exposure metering:
Metering options: Spot, Centre weighted and Average. Metering range Spot: EV2 to 21, Centre weighted: EV1 to 21, Average: EV1 to 21

Power supply:
Rechargeable Li-ion battery (7.2 VDC/1850 mAh). Optional cassette for 3 CR-123 Lithium batteries available.

Film compatibility: No

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